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9 Technical rept.

6 (SDCS)
SPECIAL DATA COLLECTION SYSTEM EVENT REPORT
NTS Event 'COLBY', 14 March 1976.

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VELA Seismological Center
312 Montgomery Street, Alexandria, Virginia 22314

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SDCS EVENT REPORT NO. 90

NTS Event "COLBY", 14 March 1976

DISTRIBUTION/AVAILABILITY CODES	
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This event report contains seismic data from the Special Data Collection System (SDCS), and other sources for the above event. Published epicenter information from seismic observations is:

	"P" Arrival	Origin Time	Lat.	Long.	m_b	M_s
NORSAR	12:41:32.0	12:30:06	38 N	116 W	5.9	N/A
Hagfors	12:41:40.2	12:29:58	37 N	118 W	6.5	5.3

Using SDCS stations, LASA and NORSAR, the epicenter location and magnitudes become

12:30:01.2 37.3N 116.5W 6.2 6.0

The programs used for LASA, NORSAR and ALPA data recovery are presently undergoing modifications. Information for LASA short-period is reported from their Teleseism Event Report; NORSAR short-period data is obtained from their bulletin. The long-period array beam recovery for these stations will be resumed upon completion of these modifications.

All SDCS stations were operational during this period.

Short-period signals associated with this event were recorded at CPSO, WH2YK, FN-WV, HN-ME, LASA and NORSAR. RK-ON short-period data could not be retrieved from the field station analog tape. All SP channels at HN-ME had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal SP channels at CPSO, WH2YK, FN-WV and HN-ME were rotated.

Long-period signals were recorded at CPSO, WH2YK, FN-WV and HN-ME. RK-ON long-period data could not be retrieved from the field station analog tape. The LP vertical instrument at WH2YK was not responding properly. All LP channels at HN-ME had polarity reversals; to correct this, mathematical inversions of the data were performed. Horizontal LP channels at CPSO, WH2YK, FN-WV and HN-ME were rotated.

Scaling factors on plots are millimicrons at 1 Hz (not corrected for instrument response).

-a-

STATION DESCRIPTION

SITE CODE	LOCATION	SITE COORDINATES			ELEVATION METERS	INSTRUMENTATION	
		DEG	MN	SECS		SHORT - PERIOD	LONG - PERIOD
ALPA	Alaska	65 14 147	14 44	00.0 N 36.0 W	626	None	31300
CPSO	McMinnville, Tennessee	35 35 085	35 41.4 N 34 13.5 W		574	6480 V 7515 H	SL210 V SL220 H
FN-WV	Franklin, West Virginia	38 32 079	32 58.0 N 30 47.0 W		910	KS36000	KS36000
LASA	Billings, Montana	46 41 106	41 19.0 N 13 20.0 W		744	HS10	7505A V 8700C H
HN-ME	Houlton, Maine	46 09 067	09 43.0 N 59 09.0 W		213	KS36000	KS36000
NORSAR	Kjeller, Norway	60 49 010	49 25.4 N 49 56.5 E		379	HS10	7505A V 8700C H
RK-ON	Red Lake, Ontario	50 50 093	50 20.0 N 40 20.0 W		366	18300	SL210 V SL220 H
WH2YK	White Horse, Yukon	60 41 134	41 41.0 N 58 02.0 W		853	18300	SL210 V SL220 H

Note: The orientation of the radial instruments at FN-WV is assumed to be $16^\circ + 5^\circ$ based on empirical data (event recordings). Rotation, where performed, is referenced to this azimuth and may be questionable.

HYPOCENTER DETERMINATION

INPUT FOR EVENT 14 MAR 76
12:30:00.0 37.000N 116.000W 0KM.

STA.	ARRIVAL	RESIDUALS		DIST.	AZ.
		CALC	REST		
LAO	12 32 54.0	-0.0	0.1	12.1	35.8
CPSO	12 35 25.0	-0.2	0.4	24.9	84.5
WH2YK	12 35 37.0	0.1	0.5	26.2	339.3
FN-WV	12 36 02.9	0.2	0.3	29.1	76.1
HN-ME	12 37 09.2	0.1	-0.5	36.8	60.4
NAO	12 41 32.0	-0.2	-0.9	73.2	24.0

67 HERRIN TRAVEL TIME TABLES

ORIGIN	LAT.	LONG.	DEPTH (KM)	SDV	IT	STA
12:30:11.7	37.667N	116.205W	64. CALC	0.2	3	6
12:30:01.2	37.286N	116.493W	0. REST	0.6	3	6

CALC				REST			
1 . 1				1 . 1			
0	.	0		0	.	0	
0	0. 2	2		0	0. 2	2	
.
0	0. 0	0		0	0. 0	0	
0	.	0		0	.	0	
0	0			0	0		

CHI2 COVERAGE ELLIPSE; 95 PER CENT CONF..LEVEL, SDV= 1.69
MAJOR 67.1KM. MINOR 38.0KM. AZ= 31 AREA= 8007 SQ.KM. REST

DATA SUMMARY

INPUT FOR EVENT 14 MAR 76
12:30:00.0 37.000N 116.000W 0KM.

STA.	PHASE	ARRIVAL		INST	PER	A/T	MAGNITUDE		DIR	DIST
		TIME					MB	MS		
LAO	EP	12 32 54.0		SAB	99.9	9999.				
CPSO	EP	12 35 25.0		SPZ	0.9	3396.	6.71			24.9
CPSO	LQ	12 43 43.0		LPT	18.0	644.				
CPSO	LR	12 45 29.0		LPZ	13.0	9759.		6.51		24.9
WH2YK	EP	12 35 37.0		SPZ	1.0	556.	5.86			26.2
WH2YK	LQ	12 44 34.0		LPT	23.0	458.				
FN-WV	EP	12 36 02.9		SPZ	1.3	9999.				
FN-WV	LQ	12 45 58.0		LPT	19.0	646.				
FN-WV	LR	12 48 08.0		LPZ	18.0	4008.		6.19		29.1
HN-ME	EP	12 37 09.2		SPZ	0.9	1432.	6.38			36.8
HN-ME	LQ	12 49 48.0		LPT	27.0	188.				
HN-ME	LR	12 52 33.0		LPZ	17.0	1698.		5.92		36.8
NAO	EP	12 41 32.0		AB	0.9	146.	5.74			73.2

ORIGIN	LAT.	LONG.	DEPTH (KM)	MAG	SDV	STA	LPMAG	LPDV	LPSTA
12:30:11.7	37.667N	116.205W	64. CALC	6.09	0.49	4	6.05	0.2	2
12:30:01.2	37.286N	116.493W	0. REST	6.17	0.45	4	6.05	0.2	2

Average long-period magnitude (M_s) is based on Rayleigh wave observations in the period range of 17 to 23 seconds per cycle.

CPSO 14 MAR 76

SPZ
1762.00 MU



SPR
578.84 MU



SPT
321.11 MU



TIME



WH2YK 14 MAR 76

12:35:37.0

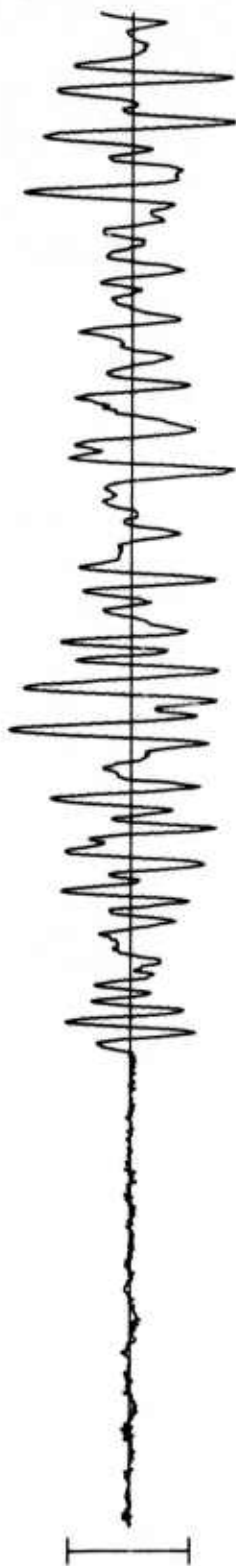
SPZ
294.13 MU



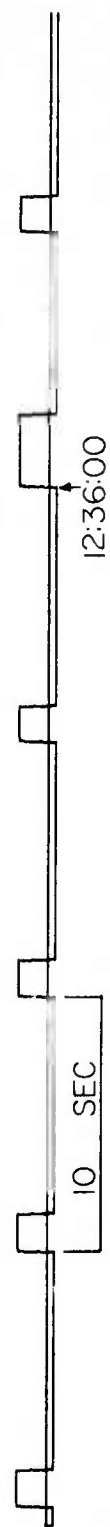
SPR
161.59 MU



SPT
135.67 MU

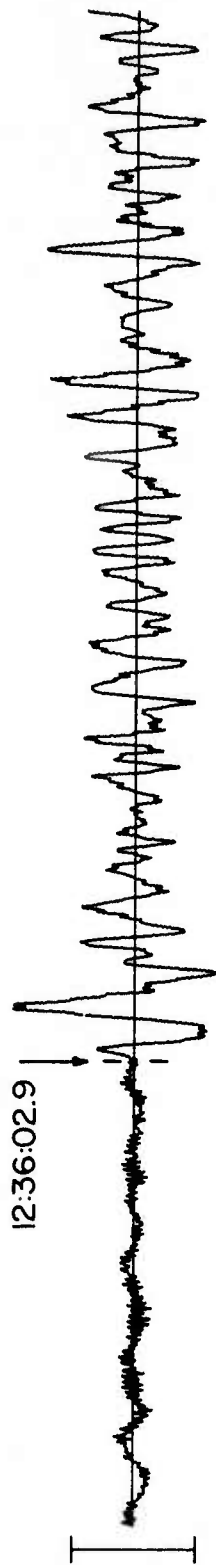


TIME

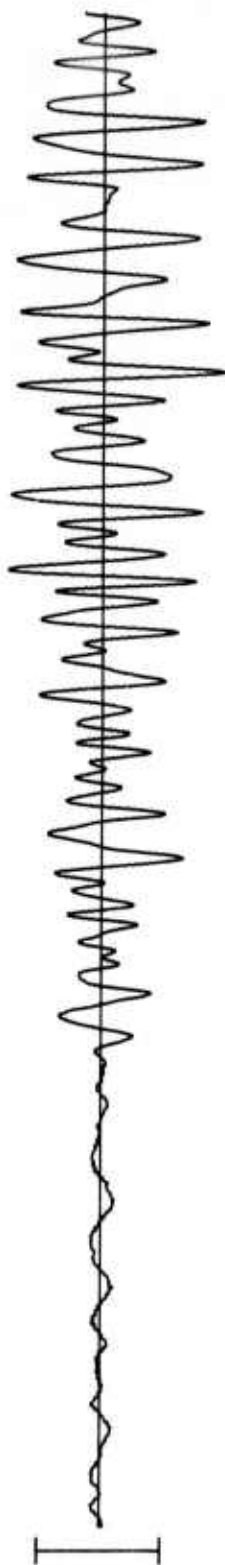


FN-WV 14 MAR 76

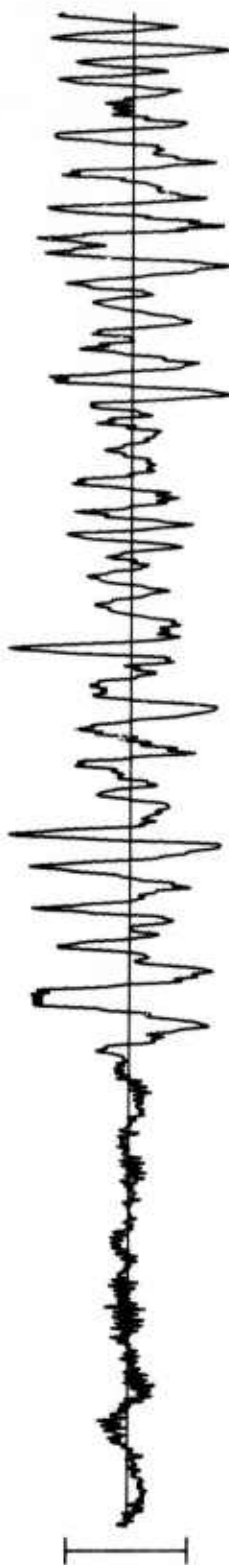
SPZ
238.89 MU



SPR
118.82 MU



SPT
140.51 MU



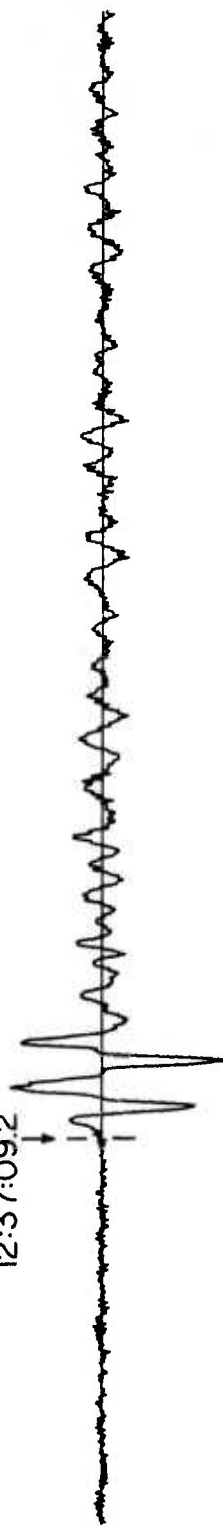
TIME



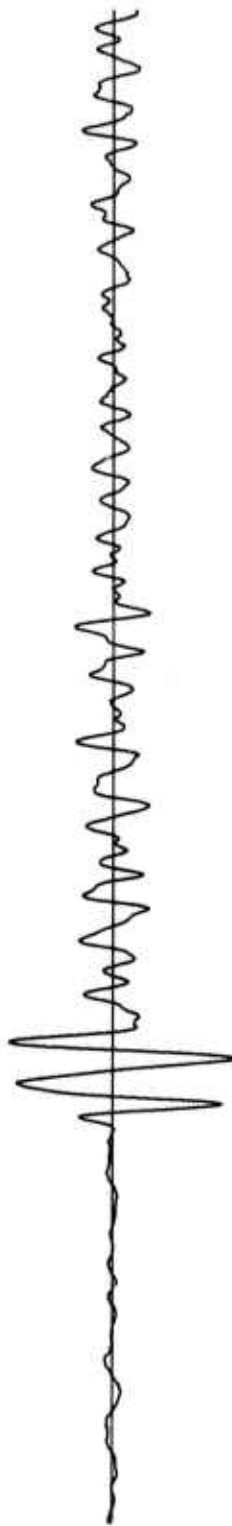
HN-ME 14 MAR 76

SPZ
989.59 MU

12:37:09.2



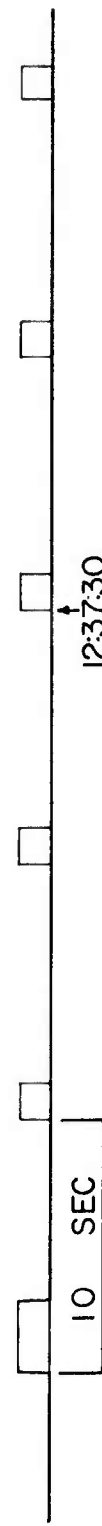
SPR
533.80 MU



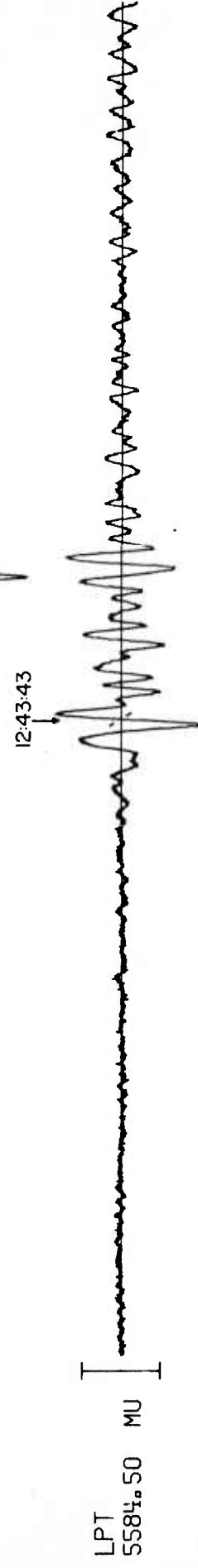
SPT
158.99 MU



TIME



CPSO 14 MAR 76



WH2YK 14 MAR 76



12:44:34

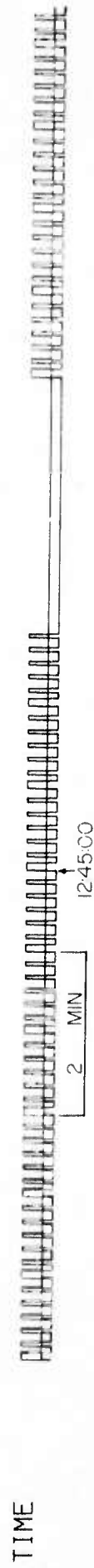


TIME



INSTRUMENT NOT RESPONDING PROPERLY

FN--WV 14 MAR 76



HN-ME 14 MAR 76

